

the Japan Islands and along the Asiatic coast from 25° to 50° N., that few typhoons could have pursued their customary paths between these parallels: 1st, 30.27; 2d, 30.29; 3d, 30.33; 4th, 30.52; 5th, 30.34; 6th, 30.25; 7th, 30.25; 8th, 30.29; 9th, 30.44; 10th, 30.39; 11th, 30.24; 12th, 30.20; 13th, 30.24; 14th, 30.27; 15th, 30.34; 16th, 30.33; 17th, 30.33; 18th, 30.26; 19th, 30.22; 20th, 30.26; 21st, 30.21; 22d, 30.27; 23d, 30.21; 24th, 30.22; 25th, 30.15; 26th, 30.10; 27th, 30.22; 28th, 30.32; 29th, 30.32; 30th, 30.32; 31st, 30.28. Over the China Sea and Phillipine Islands, the development and passage of typhoons may have occurred with the usual frequency, but little can now be said regarding that probability, owing to the extreme paucity of reports from these localities.

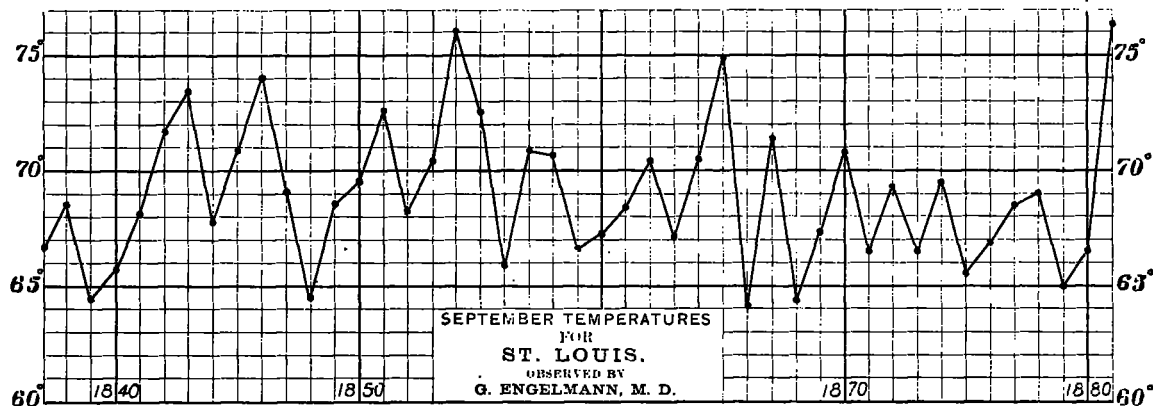
TEMPERATURE OF THE AIR.

The mean temperature of the air for September, 1881, is shown by the isothermal lines (in red) on Chart No. II. The table of mean and comparative temperatures in the right-hand corner of the chart shows, in the first column, the average for the month throughout the various districts, as deduced principally from observations taken at Signal Service stations. In the two remaining columns are shown the means for the present month and the departures of such means from the average for many years. South and east of a line extending southwestward from Lake Michigan to New Mexico, the temperature is everywhere above the normal. The excess ranges from about normal in the Florida peninsula and Rio Grande valley to 8°.9 in the Lower Lake region. There is a slight excess reported from the Southern Pacific Coast region. The mean temperature of the present month is remarkably high over the eastern portion of the country. In comparison with previous years the departures from normal are found to be the largest by from 2° to 3°, that have occurred since the establishment of Signal Service stations. The region of greatest excess (from +5.7 to +8°.9) is embraced by the following districts: Upper Mississippi valley, Ohio valley and Tennessee, Middle Atlantic states and the Lower Lake region. Since 1872, the following are the maximum departures of excess, with corresponding districts: 1873, +0°.6, West Gulf states; 1874, +5°.8 and +4°.7, Upper and Lower Lakes, respectively; 1875, all deficiencies; 1876, all deficiencies; 1877, +5°.9 and +4°.6, in the Upper Missouri and Upper Mississippi valleys, respectively; 1878, +3°.6, Upper Lakes; 1879, +5°.8, Western Plateau; 1880, +1°.8 and +1°.9, in New England and the Northern Plateau, respectively. Throughout the Plateau and in the Middle and Northern Pacific Coast regions, in Minnesota and the Missouri valley, the temperature is below the average, the deficiency ranging from -0°.8 in Minnesota to -5°.1 in the Northern Plateau.

Ranges of Temperature at Signal Service stations.—Monthly ranges in general varied from 25° to 40° over the country east of the Rocky Mountains and from 45° to 60° to the westward of that region. The *smallest* ranges were: Punta Rassa, 20°; Key West, 21°; Portsmouth, N. C., 22°; Hatteras and Fort Macon, 23°; Port Eads, 24°; Charleston, Savannah, Galveston and Jacksonville, 25°; Cedar Keys, Charlotte, Smithville and Wood's Holl, 26°; Chincoteague, 27°; Cape Henry and Norfolk, 28°. The *largest* were: Ft. Gibson, 73°; North Platte, 72°; Eagle Rock, 69°; Winnemucca, 68°; Fort Bennett and Campo, 65°; Yankton, 64°. The *daily* ranges varied in the different districts as follows: New England, 15° at New Shoreham to 33° at Thatcher's Island; Middle Atlantic states, 19° at Atlantic City to 35° at Sandy Hook and Washington; South Atlantic states, 15° at Charleston and Portsmouth to 24° at Augusta; Florida Peninsula, 17° at Key West to 19° at Cedar Keys; Eastern Gulf states, 20° at Pensacola to 29° at Vicksburg; Western Gulf States, 13° at Port Eads and 16° at Galveston to 38° at Shreveport and 47° at Fort Gibson; Ohio valley and Tennessee, 22° at Cincinnati to 32° at Knoxville and Chattanooga; Lower Lake region, 24° at Toledo to 31° at Buffalo; Upper Lake region, 25° at Grand Haven and Escanaba to 32° at Chicago; Upper Mississippi valley, 27° at Cairo to 35° at Dubuque and 44° at St. Paul; Missouri valley, 32° at Leavenworth to 42° at Fort Bennett; extreme Northwest, 34° at Moorehead to 45° at Fort Buford; Northern Slope, 40° at Cheyenne to 50° at Fort Keogh and North Platte; Middle Slope, 47° at Fort Elliott to 41° at Denver and 45° at Dodge City; Southern Slope, 24° at Henrietta to 39° at Concho and 44° at El Paso; Rio Grande valley, 27° at Brownsville to 36° at Rio Grande and 38° at Castroville; Northern Plateau, 40° Lewiston to 47° at Missoula; Middle Plateau, 32° at Salt Lake City, 35° at Pioche and 57° at Winnemucca; Southern Plateau, 25° at Fort Grant to 45° at Prescott and 46° at La Mesilla; North Pacific coast, 35° at Olympia to 44° at Roseburg; Middle Pacific coast, 22° at San Francisco to 38° at Sacramento; Southern Pacific coast, 23° at San Diego to 45° at Los Angeles and 55° at Campo.

Deviations from Mean Temperatures.—Under this heading departures exhibited by the reports from the regular Signal Service stations are shown in the table of comparative temperatures on the right-hand side of chart No. II. The following items of importance in connection with this subject are reported by voluntary observers: *Connecticut*: Southington, month marked by extreme heat; mean temperature far above the average; higher than the mean of August for the past six years, and the mean of June for the past twelve years, being nearly equal to the mean of the warm July of 1875. *Illinois*: Rockford, mean temperature considerably above the average. *Iowa*: Clinton, mean temperature 7°.8 above the mean for 1880 and 9°.9 above the mean for 1879; first September for many years without frost. *Kansas*: Lawrence, mean temperature 4°.8 above

the mean for the past 13 years. *Maine*: Gardiner, mean temperature 3° above that of past 45 years; but three instances during that period where the monthly means exceeded that of the present month; in 1841 mean temperature 3°.05 above the mean of the present month. *Maryland*: Fallston, mean temperature 9°.7 above mean of past 10 years; Sandy Springs, mean temperature 7° above that of the past 15 years; warmer than any August for past 10 years and warmer than any June for past 15 years. *Missouri*: St. Louis, the "Missouri Weather Service" reports: mean temperature considerably above the average of the past 45 years; highest mean during that period,



76°.0 in 1854; highest maximum 102°.5 in September, 1864; lowest minimum, 35° in September, 1839. *Nebraska*: Nebraska Weather Service reports: mean temperature of the State 4° above September, 1880. *New Hampshire*: Contoocookville, mean temperature 5°.2 above the average for the past 11 years. *New York*: Waterburg, mean temperature unprecedented as compared with the average of the past 10 years; warmest September during that period occurred in 1878, which was 9°.4 below that of the present year; the highest mean temperature recorded for any month during the past 10 years occurred in July, 1878 and is only 0°.8 above that for September, 1881. *North Volney*, mean temperature 8°.9 above that for the past 13 years; highest mean for any September during that period was 64°.2 in 1869, which mean is 5° below that of September, 1881. *Pennsylvania*: Dyberry, mean temperature 6°.5 above that of past 20 years. West Chester, mean temperature considerably above the average for the past 26 years. *Texas*: Clarksville, mean temperature 5° above the mean for the past 12 years. *Vermont*: Woodstock, mean temperature 6°.5 above the mean for the past 10 years; 13°.5 above the mean of September, 1871 and considerably warmer than any September for the past 14 years; warmest September during that period occurred in 1880, mean 59°.63; coldest in 1871, mean 49°. *Virginia*: Johnstown, warmest September in past 13 years; highest mean temperature (74°.6) during that period occurred in 1878, which is 5°.2 below the mean of the present month. *West Virginia*: Flemington, mean temperature remarkably high; month unusually hot. *Helvetia*, mean temperature 7°.9 above that of past five years.

High Temperatures.—The maximum temperatures of the month have in many instances been very remarkable, yet the suffering to animal and vegetable life did not assume the proportions of either of the two previous months. The regions within which the extremes of heat occurred coincided, as in July and August, with that section of the country reporting the greatest departure of the monthly mean from the average for many years. Compared with August there has been a very decided translation eastward of the area of excessive heat, and a remarkable increase of relative departures from the normal. The maximum temperatures occurring as they did between the 4th and the 10th, became associated with the passage of low areas No. I and II, whose extreme northerly courses were conducive to the accompanying movement of continued southerly winds over the central and eastern portions of the country. Dubuque, 5th, one case of sunstroke, first reported this year. Chicago, 6th, 94°, highest since 1873. Cincinnati, during the week ending the 10th three fatal cases of sunstroke occurred. Baltimore, 6th, several cases of sunstroke; 7th, 101°, highest ever recorded. Philadelphia, 7th, 101°.5, highest for the past 10 years. Ft. Myer, Va., 7th, 102°, highest ever recorded. Freehold, N. J., 7th, 100°, hottest since 1873; work suspended in the mills and at the iron foundry. New York City, 27th, 102° in the shade; two sunstrokes, none fatal. Southington, Conn., 7th, 100°, highest ever experienced. Charleston, Ill., 5th, 102°, highest for many years; extreme suffering from heat. Upper Alton, Ill., 5th, 101°. Anna, Ill., 5th, 102°. Laconia, Ind., 5th, 101°. Vevay, Ind., 5th, 100°. Forsyth, Ga., 4th, 100°. Rockford, Ill., 5th, mean temperature, 83°.5, highest daily mean reported during summer. Muscatine, Ia., 5th, 103°. Clay Centre, Kan., 3d, 109°. Independence, Kan., 3d, 105°. Lawrence, Kan., daily maximum temperature exceeded 90° on 14 days. Fallston, Md., 7th, 102°.5 higher than the highest maximum ever before recorded. Sandy Springs, Md., 7th, 98°.7 higher than the maximum temperature for any September during the past 15 years, and 3° above the highest maximum for the year 1881.

Woodstock, Md., 6th, 98°, highest maximum for September during the past 16 years. Dyberry, Pa., 7th, 95°, 8 higher than the highest maximum recorded during September for the past 20 years. Woodstock, Vt., 7th, 93°; 0°.4 above the highest maximum of any September during the past 10 years.

Low Temperatures.—Fort Supply, Ind. Ty., 7th, 275 head of cattle and three horses reported frozen to death at Beaver creek, 12 miles west of station; confirmatory report from Castroville, Tex., 10th, stated that a large number of cattle were chilled to death near Ft. Supply, from an extremely sudden fall in the temperature.

Table of Comparative Maximum Temperatures for the month of September.

State or Territory.	Maximum for September, 1881, Signal Service.		Highest since Signal Service Stations were opened—3 to 10 years.			Highest from any other source.			
	Station.	Temp.	Station.	Year.	Temp.	Place.	Year.	Temp.	Length of Record.
Alabama.....	Montgomery and Mobile.	96°	Montgomery.....	1875	97°	Mount Vernon Arsenal.....	1869	98°	31 years.
Arizona.....	Yuma.....	107°	Burke's and Yuma.....	1879	118°	Fort Meade.....	1879	114°	14 "
Arkansas.....	Little Rock.....	97°	Little Rock.....	1880	90°	Fort Smith.....	1880	101°	21 "
California.....	Los Angeles.....	102°	Red Bluff.....	1877	106°	Little Rock.....	1840	88°	37 "
Colorado.....	Denver.....	88°	Denver.....	1878	93°	Fort Miller.....	1853	114°	13 "
Connecticut.....	New Haven.....	100°	New London.....	1880	89°	Fort Lyon.....	1868	99°	19 "
						Columbia.....	1866	94°	9 "
						Fort Trumbull.....	1872	90°	47 "
Dakota.....	Yankton.....	100°	Fort Sully.....	1874	107°	New Haven.....	1864	92°	57 "
						Fort Randall.....	1863	107°	20 "
Delaware.....	Delaware Breakwater.....	93°				Fort Sully.....	1874	106°	14 "
Dist. of Columbia.....	Washington.....	104°	Washington.....	1880	94°	Fort Delaware.....	1865	90°	44 "
Florida.....	Jacksonville & Key West.....	94°	Jacksonville.....	1875	98°	Washington.....	1838	95°	58 "
						Fort Jefferson.....	1871	100°	12 "
Georgia.....	Augusta.....	97°	Augusta.....	1875	97°	Fort King.....	1833	100°	10 "
Idaho.....	Fort Lapwai.....	90°	Boise City.....	1878	96°	Oglethorpe Barracks.....	1845	99°	36 "
Illinois.....	Chicago.....	97°	Cairo.....	1876	92°	Fort Boise.....	1874	103°	16 "
						Manchester.....	1864	102°	10 "
						Highland.....	1841	100°	11 "
Indiana.....	Indianapolis.....	95°	Indianapolis.....	1875	90°	Vevay.....	1855	96°	15 "
Indian Territory.....	Fort Gibson.....	105°	Fort Gibson.....	1875	98°	Fort Gibson.....	1884	103°	52 "
						Fort Sill.....	1871	103°	10 "
Iowa.....	Keokuk.....	97°	Fort Sill.....	1877	98°	Mount Vernon.....	1874	99°	16 "
Kansas.....	Dodge City.....	94°	Idi-ague.....	1878	92°	Fort Leavenworth.....	1860	108°	49 "
Kentucky.....	Louisville.....	90°	Dodge City.....	1876	90°	Newport Barracks.....	1864	96°	28 "
Louisiana.....	Shreveport.....	101°	Louisville.....	1875	92°	Fort Jessup.....	1824	100°	52 "
Maine.....	Portland.....	95°	Shreveport.....	1877	98°	Brunswick.....	1825	96°	52 "
Maryland.....	Baltimore.....	101°	Eastport.....	1877	81°	Fort Washington.....	1851	99°	37 "
Massachusetts.....	Boston.....	102°	Baltimore.....	1875	92°	Fort Warren.....	1872	100°	18 "
Michigan.....	Port Huron.....	97°	Boston.....	1880	93°	Fort Brady.....	1861	98°	57 "
Minnesota.....	St. Paul.....	91°	Detroit and Marquette.....	1874	97°	Fort Snelling.....	1857	92°	50 "
Mississippi.....	Vicksburg.....	98°	St. Paul.....	1878	94°	Columbus.....	1865	95°	9 "
Missouri.....	St. Louis.....	102°	Vicksburg.....	1878	100°	Allentown.....	1868	100°	3 "
			St. Louis.....	1875	92°	Jefferson Barracks.....	1864	99°	35 "
Montana.....	Fort Benton.....	95°	Fort Keogh.....	1879	96°	Tongue River.....	1877	103°	3 "
						Fort Benton.....	1878	101°	11 "
Nebraska.....	North Platte.....	101°	North Platte.....	1878	97°	Fort McPherson.....	1870	102°	14 "
Nevada.....	Winnemucca.....	90°	Winnemucca.....	1878	94°	Fort McPherson.....	1870	102°	14 "
New Hampshire.....	Mount Washington.....	64°	Mount Washington.....	1880	65°	Fort McPherson.....	1870	102°	14 "
New Jersey.....	Sandy Hook.....	101°	Atlantic City.....	1880	94°	Dartmouth College.....	1843	92°	17 "
New Mexico.....	La Mesilla.....	99°	La Mesilla.....	1879	105°	Haddonfield.....	1866	90°	6 "
New York.....	New York City.....	100°	New York City.....	1875	94°	Fort Craig.....	1871	103°	26 "
North Carolina.....	Charlotte and Kittyhawk.....	92°	Kittyhawk.....	1880	95°	Poughkeepsie.....	1849	100°	20 "
			Wilmington.....	1875	93°	Fort Johnson.....	1831	88°	54 "
Ohio.....	Cleveland and Columbus.....	98°	Cincinnati.....	1874	92°	Cincinnati.....	1868	100°	35 "
Oregon.....	Umatilla.....	91°	Umatilla.....	1874	95°	Fort Haskins.....	1860	98°	9 "
Pennsylvania.....	Philadelphia and Pits- burg.....	102°	Pittsburg.....	1874	97°	Carlisle Barracks.....	1868	97°	34 "
Rhode Island.....	Newport.....	88°	Newport.....	1880	87°	Providence.....	1860	90°	35 "
South Carolina.....	Charleston.....	93°	Charleston.....	1878	94°	Fort Moultrie.....	1857	93°	27 "
Tennessee.....	Memphis and Nashville.....	98°	Memphis and Nashville.....	1875	93°	Humboldt.....	1871	97°	4 "
Texas.....	Eagle Pass.....	104°	Rio Grande.....	1877	107°	Fort Stockton.....	1873	109°	21 "
Utah.....	Salt Lake City.....	87°	Salt Lake City.....	1875	83°	Fort Douglas.....	1876	97°	18 "
Vermont.....	Burlington.....	90°	Burlington.....	1880	90°	Lunenburg.....	1864	90°	8 "
Virginia.....	Fort Myer.....	102°	Norfolk.....	1880	96°	Fort Monroe.....	1862	97°	54 "
Washington Ty.....	Dayton.....	91°	Dayton.....	1880	88°	Fort Walla Walla.....	1860	98°	10 "
West Virginia.....	Morgantown.....	91°	Morgantown.....	1874	90°	Weston.....	1876	88°	4 "
Wisconsin.....	Madison and Milwaukee.....	92°	Milwaukee.....	1874	94°	Fort Howard.....	1860	98°	30 "
Wyoming.....	Cheyenne.....	86°	Cheyenne.....	1875	88°	Fort Laramie.....	1871	99°	26 "

Frost.—In the various States and Territories it was reported, as follows: Arizona, 24th, 29th; Arkansas, 16th; California, Campo, 1st to 24th, 27th, 29th, 30th; Colorado, 10th; Dakota, 6th, 7th, 8th, 14th to 17th, 21st, 22d, 26th, 28th; Idaho, 2d, 6th to 16th, 19th to 22d, 24th, 26th, 27th, 29th, 30th; Illinois, 10th, 13th; Iowa, 10th, 12th, 28th; Kansas, 16th, 17th; Maine, 7th, 21st, 22d; Massachusetts, 2d, 28th; Michigan, 14th, 28th, 29th; Minnesota, 6th, 7th, 15th, 22d, 26th, 28th, 30th; Missouri, 11th, 16th; Montana, 1st, 2d, 5th, 7th, 9th to 17th, 21st, 25th to 29th; Nebraska, 16th, 28th; New Hampshire, 13th, 28th; New York, 12th, 14th, 29th; Nevada, 4th, 6th, 7th, 19th, 24th, 27th, 29th, 30th; Ohio, 12th; Oregon, 10th, 27th, 30th; Pennsylvania, 12th, 14th; Tennessee, 18th; Texas, 7th, 17th; Utah, 6th to 10th, 25th to 27th, 30th; Vermont, 21st, 22nd, 29th; Washington Territory, 2nd, 6th, 9th, 26th, 30th; Wisconsin, 28th, 29th; Wyoming, 10th, 15th to 17th, 30th.

Table of Maximum and Minimum Temperatures for September, 1881.

State or Territory.	Signal Service.			U. S. Army Post Surgeons or Voluntary Observers.			State or Territory.	Signal Service.			U. S. Army Post Surgeons or Voluntary Observers.		
	Station.	Max.	Min.	Station.	Max.	Min.		Station.	Max.	Min.	Station.	Max.	Min.
Alabama.....	Montgomery.....	96°	57°	Green Springs.....	95°	56°	Missouri.....	St. Louis.....	102°	49°	Pierce City.....	.....	34°
Do.....	Mobile.....	96°	.....	.....	.....	.....	Montana.....	Ft. Benton.....	95°	.....	.....	.....	.....
Arizona.....	Yuma.....	107°	.....	Texas Hill.....	118°	.....	Do.....	Ft. Missoula.....	23°	.....	Clear Creek & Genoa.....	103°	.....
Do.....	Prescott.....	84°	.....	Mt. Ida.....	98°	34°	Nebraska.....	North Platte.....	101°	30°	Hot Springs.....	98°	.....
Arkansas.....	Little Rock.....	87°	47°	Colton.....	112°	.....	Do.....	Winemucca.....	90°	22°	Auburn and Contoocookville.....	55°	.....
California.....	Los Angeles.....	102°	.....	Boca.....	24°	.....	Nevada.....	Mt. Wash'ton.....	64°	28°	Atco and Vineland.....	104°	.....
Do.....	Campo.....	83°	.....	.....	.....	.....	New Hampshire.....	.....	.....	.....	Freehold.....	46°	.....
Colorado.....	Denver.....	88°	37°	Ft. Lewis.....	26°	.....	Do.....	Sandy Hook.....	101°	.....	Fort Union.....	25°	.....
Do.....	.....	.....	.....	Ft. Randall.....	102°	.....	Do.....	Atlantic City & Cape May.....	55°	43°	Pen Yan.....	102°	.....
Connecticut.....	New Haven.....	100°	47°	.....	.....	.....	Do.....	La Messilla.....	99°	.....	Madison Barracks.....	39°	.....
Do.....	Yankee.....	100°	.....	.....	.....	.....	New Mexico.....	N. York City.....	106°	45°	Weldon.....	57°	.....
Do.....	Ft. Sudley.....	21°	.....	.....	.....	.....	New York.....	Buffalo.....	.....	.....	Franklin and Murphy.....	55°	.....
Delaware.....	Breakwater.....	93°	63°	.....	.....	.....	Do.....	Charlotte and Kittyhawk.....	92°	60°	College Hill.....	102°	.....
Dist. Columbia.....	Washington.....	104°	90°	.....	.....	.....	Do.....	Smithville.....	.....	.....	Westerville.....	43°	.....
Florida.....	Cedar Keys.....	.....	.....	.....	.....	.....	Ohio.....	Cleveland and Columbus.....	98°	50°	.....	.....	.....
Do.....	Jacksonville.....	.....	.....	.....	.....	.....	Do.....	Umatilla.....	91°	35°	Milton.....	105°	.....
Do.....	Key West.....	94°	.....	.....	.....	.....	Do.....	Roseburg.....	.....	.....	Franklin.....	38°	.....
Do.....	Pensacola.....	62°	.....	.....	.....	.....	Pennsylvania.....	Philadelphia.....	102°	51°	Fort Adams.....	96°	.....
Georgia.....	Augusta.....	97°	.....	.....	.....	.....	Do.....	Pittsburg.....	102°	51°	Aiken.....	95°	.....
Do.....	Atlanta.....	90°	.....	.....	.....	.....	Rhode Island.....	Newport.....	88°	68°	Columbia.....	95°	.....
Do.....	Ft. Lawler.....	90°	.....	.....	.....	.....	South Carolina.....	Charleston.....	93°	.....	Ashwood.....	100°	.....
Idaho.....	Eagle Rock.....	17°	.....	.....	.....	.....	Tennessee.....	Memphis.....	98°	.....	.....	.....	.....
Do.....	Springfield.....	47°	.....	.....	.....	.....	Do.....	Nashville.....	98°	50°	.....	.....	.....
Illinois.....	.....	.....	.....	.....	.....	.....	Texas.....	Eagle Pass.....	104°	.....	.....	.....	.....
Do.....	.....	.....	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Indiana.....	Indianapolis.....	95°	48°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	.....	.....	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Indiana Ty.....	Fort Gibson.....	105°	32°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	Keokuk.....	97°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Iowa.....	Des Moines.....	40°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	Dodge City.....	90°	39°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Kansas.....	.....	.....	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	.....	.....	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Kentucky.....	Louisville.....	96°	54°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Louisiana.....	Shreveport.....	101°	47°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Maine.....	Portland.....	95°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	Eastport.....	41°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Maryland.....	Baltimore.....	101°	59°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	.....	.....	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Massachusetts.....	Boston.....	102°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	Springfield.....	46°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Michigan.....	Port Huron.....	97°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	Margnette.....	42°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Minnesota.....	St. Paul.....	91°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Do.....	St. Vincent.....	24°	.....	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....
Mississippi.....	Vicksburg.....	98°	51°	.....	.....	.....	Do.....	.....	.....	.....	.....	.....	.....

Ice.—Ft. Gibson, 16th, formed in exposed places. Clay Centre, Kan., 17th. Cheyenne, 15th, $\frac{1}{16}$ inch. Eagle Rock, 15th, $\frac{1}{4}$ inch; 21st, $\frac{1}{2}$ inch; 28th, very thin. Boise City, 26th. Winemucca, 11th, 19th.

PRECIPITATION.

The general distribution of rain-fall for the month of September, 1881, is shown on chart No. III, from the reports of over 500 stations. From the table in the left-hand corner of the chart is obtained a monthly average for each of the various districts, determined from the records (covering a period of many years) of Signal Service stations, and also a comparison of the present month with such averages. Upon examination of the chart it is found that the monthly rain-fall is decidedly above the average throughout the central portions of the country, the regions of excess being most marked in the Upper Mississippi and Missouri valleys. With the exception of Minnesota these were the regions of considerable deficiency in August. Minnesota reports the largest excess (4.44 inches) that has occurred in that state since the establishment of Signal Service stations, and with the exception of an excess of 5.50 inches in the West Gulf States in 1875, is the largest ever reported by any district. The marked excess of 3.59 inches in the Upper Mississippi valley is by far the largest ever reported by that district, the next highest 2.35 inches occurred in September, 1876. With regard to the Missouri valley the excess there reported 3.03 is the largest since 1872, the next highest 2.10 inches occurred in 1876. Throughout the Atlantic coast states and reaching northwestward to include the Ohio valley and the Lower Lake region deficiencies ranging from 0.43 inch to 2.61 inches occur. A slight deficiency is reported from the North Pacific coast region while the South Pacific coast is normal. In the Plateau and Rocky Mountain regions the extremes are from 0.00 in Nevada to 3.80 in southeastern Arizona and southwestern New Mexico.

Deviation from Average Precipitation.—Under this heading departures exhibited by the reports from the regular Signal Service stations are shown in the table of comparative temperatures on the left-hand side of Chart No. III. The following items of importance in connection with this subject were reported by voluntary observers:—*Connecticut*: Southington, monthly rain-fall less than for any month since 1869. *Kansas*: Lawrence, monthly rain fall nearly double the average